

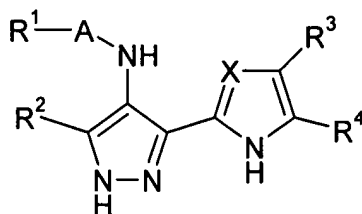
Amendments to the claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1.-63. (Canceled)

64. (new) A compound of the formula (I):



or a salt, N-oxide or solvate thereof;

wherein

X is CR⁵ or N;

A is a bond or $-(CH_2)_m-(B)_n$;

B is C=O, NR^B(C=O) or O(C=O) wherein R^B is hydrogen or C₁₋₄ hydrocarbyl optionally substituted by hydroxy or C₁₋₄ alkoxy;

m is 0, 1 or 2;

n is 0 or 1;

R¹ is hydrogen, a carbocyclic or heterocyclic group having from 3 to 12 ring members, or an optionally substituted C₁₋₈ hydrocarbyl group;

R² is hydrogen, halogen, methoxy, or a C₁₋₄ hydrocarbyl group optionally substituted by halogen, hydroxyl or methoxy;

R³ and R⁴ are the same or different and each is selected from hydrogen, CN, C(O)R⁸, optionally substituted C₁₋₈ hydrocarbyl and carbocyclic or heterocyclic groups having from 3 to 12 ring members; and

R⁵ is hydrogen, a group R² or a group R¹⁰ wherein R¹⁰ is selected from halogen, hydroxy, trifluoromethyl, cyano, nitro, carboxy, amino, mono- or di-

C₁₋₄ hydrocarbylamino, carbocyclic and heterocyclic groups having from 3 to 12 ring members; a group R^a-R^b wherein R^a is a bond, O, CO, X¹C(X²), C(X²)X¹, X¹C(X²)X¹, S, SO, SO₂, NR^c, SO₂NR^c or NR^cSO₂; and R^b is selected from hydrogen, carbocyclic and heterocyclic groups having from 3 to 12 ring members, and a C₁₋₈ hydrocarbyl group optionally substituted by one or more substituents selected from hydroxy, oxo, halogen, cyano, nitro, carboxy, amino, mono- or di-C₁₋₄ hydrocarbylamino, carbocyclic and heterocyclic groups having from 3 to 12 ring members and wherein one or more carbon atoms of the C₁₋₈ hydrocarbyl group may optionally be replaced by O, S, SO, SO₂, NR^c, X¹C(X²), C(X²)X¹ or X¹C(X²)X¹;

R^c is selected from hydrogen and C₁₋₄ hydrocarbyl;

X¹ is O, S or NR^c and X² is =O, =S or =NR^c; and

R⁸ is selected from OR¹¹, SR¹¹ and NR¹²R¹³;

R¹¹ is selected from optionally substituted C₁₋₈ hydrocarbyl and carbocyclic or heterocyclic groups having from 3 to 12 ring members; and one of R¹² and R¹³ is a group R¹¹ and the other of R¹² and R¹³ is hydrogen or C₁₋₄ alkyl; or R¹² and R¹³ and the nitrogen atom to which they are attached together form a saturated heterocyclic group having from 4 to 7 ring members and containing 1, 2 or 3 heteroatom ring members selected from N, O and S.

65. (new) A compound according to claim 64 wherein X is N.

66. (new) A compound according to claim 64 wherein m is 0 or 1, n is 1 and B is C=O.

67. (new) A compound according to claim 64 wherein R² is hydrogen, fluorine or methyl, preferably hydrogen.

68. (new) A compound according to claim 64 wherein R¹ is a monocyclic or bicyclic aryl or heteroaryl group of 3 to 12 ring members which is unsubstituted or substituted by one or more substituent groups R¹⁰ as defined in claim 64.

69. (new) A compound according to claim 68 wherein the aryl or heteroaryl group R¹ is selected from phenyl, pyrazolo[1,5-a]pyridinyl, furanyl, indolyl, oxazolyl,

thiazolyl, isoxazolyl, pyrrolyl, pyridyl, quinolinyl, 2,3-dihydro-benzo[1,4]dioxine, benzo[1,3]dioxole, 2,3-dihydrobenzofuranyl, imidazolyl and thienyl; each optionally substituted by one or more substituent groups R^{10} as defined in claim 64.

70. (new) A compound according to claim 69 wherein the aryl or heteroaryl group R^1 is unsubstituted or is substituted by one or more substituent groups selected from the group R^{10a} consisting of halogen, hydroxy, trifluoromethyl, cyano, nitro, carboxy, heterocyclic groups having 5 or 6 ring members and up to 2 heteroatoms selected from O, N and S, a group R^a-R^b wherein R^a is a bond, O, CO, $X^3C(X^4)$, $C(X^4)X^3$, $X^3C(X^4)X^3$, S, SO, or SO_2 , and R^b is selected from hydrogen, heterocyclic groups having 5 or 6 ring members and up to 2 heteroatoms selected from O, N and S, and a C_{1-8} hydrocarbyl group optionally substituted by one or more substituents selected from hydroxy, oxo, halogen, cyano, nitro, carboxy, amino, mono- or di- C_{1-4} hydrocarbylamino, carbocyclic and heterocyclic groups having 5 or 6 ring members and up to 2 heteroatoms selected from O, N and S; wherein one or more carbon atoms of the C_{1-8} hydrocarbyl group may optionally be replaced by O, S, SO, SO_2 , $X^3C(X^4)$, $C(X^4)X^3$ or $X^3C(X^4)X^3$; X^3 is O or S; and X^4 is =O or =S.

71. (new) A compound according to claim 64 wherein R^1 is a group as set out in Table 1:

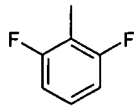
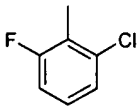
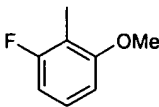
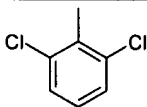
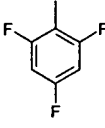
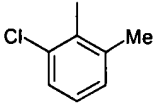
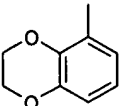
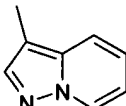
Table 1			
			
A1	A2	A3	A4
			
A5	A6	A7	A8

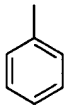
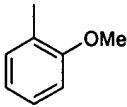
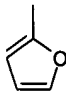
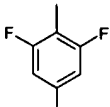
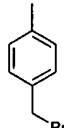
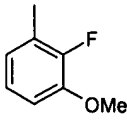
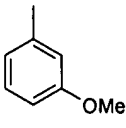
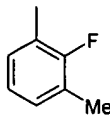
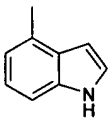
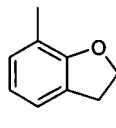
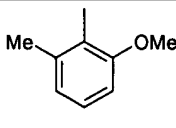
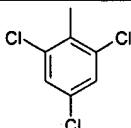
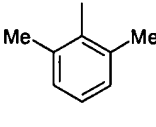
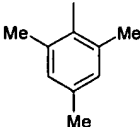
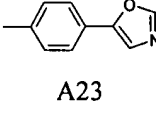
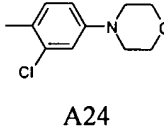
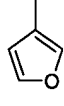
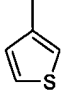
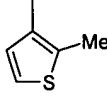
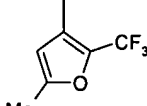
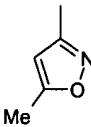
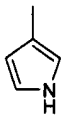
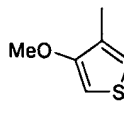
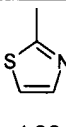
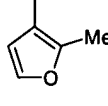
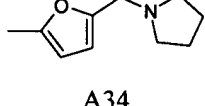
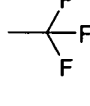
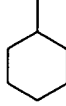
Table 1			
 A9	 A10	 A11	 A12
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 A17	 A18	 A19	 A20
 A21	 A22	 A23	 A24
 A25	 A26	 A27	 A28
 A29	 A30	 A31	 A32
 A33	 A34	 A35	 A36

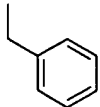
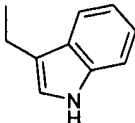
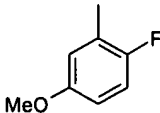
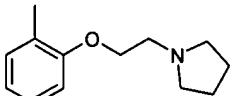
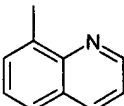
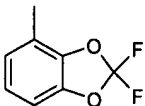
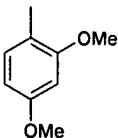
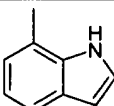
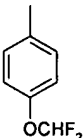
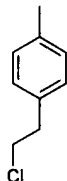

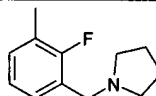
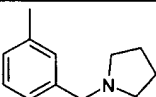
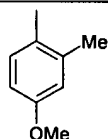
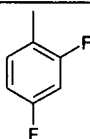
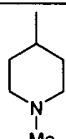
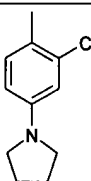
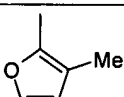
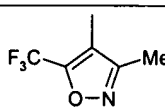
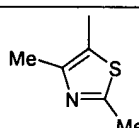
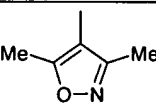
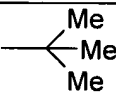
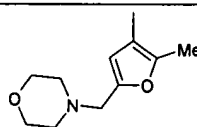
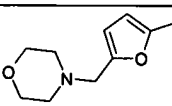
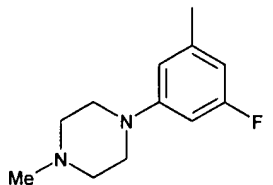
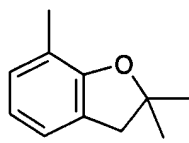
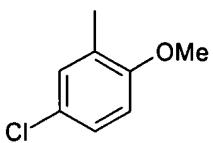
Table 1			
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 A45	 A46	 A47	 A48
 A49	 A50	 A51	 A52
 A53	 A54	 A55	 A56
 A57	 A58	 A59	 A60

Table 1			
 A61	 A62	 A63	

72. (new) A compound according to claim 71 wherein R¹ is selected from groups A1, A3, A61, A62 and A63 in Table 1 of claim 71 (and more preferably A1).

73. (new) A compound according to claim 64 wherein:

- (A) one or both of R³ and R⁴ is or are other than hydrogen and is or are selected from optionally substituted C₁₋₈ hydrocarbyl and an optionally substituted carbocyclic or heterocyclic group selected from phenyl, naphthyl, thienyl, isoxazolyl, pyridyl, 2,3-dihydro-benzo[1,4]dioxine; or
- (B) one of R³ and R⁴ is an optionally substituted group selected from phenyl, naphthyl, thienyl, isoxazolyl, pyridyl, 2,3-dihydro-benzo[1,4]dioxine, and the other one of R³ and R⁴ is an optionally substituted C₁₋₈ hydrocarbyl group;

wherein the optional substituents in (A) and (B) for the carbocyclic or heterocyclic groups are selected from the groups R¹⁰ and R^{10a} as defined in claim 64 or claim 70; and

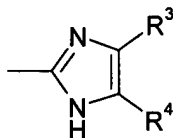
wherein the optionally substituted C₁₋₈ hydrocarbyl group (A) and (B) is selected from:

- (i) C₁₋₄ alkyl, hydroxy-C₁₋₄ alkyl and C₂₋₄ alkenyl; and
- (ii) a C₁₋₈ hydrocarbyl group optionally substituted by a substituent selected from optionally substituted monocyclic carbocyclic and heterocyclic groups, NR¹²R¹³, C₁₋₄ alkoxy, halogen, hydroxy, C₁₋₄ alkylsulphonylamino, amino, mono- and di-C₁₋₄ alkylamino, wherein the alkyl residues of the C₁₋₄ alkoxy, mono- and di-C₁₋₄ alkylamino

groups may themselves be further substituted by a substituent selected from $\text{NR}^{12}\text{R}^{13}$, C_{1-4} alkoxy, hydroxy, C_{1-4} alkylsulphonylamino, amino, and mono- and di- C_{1-4} alkylamino, wherein R^{12} and R^{13} are as defined in claim 64, and wherein the optional substituents for the carbocyclic and heterocyclic groups are selected from the group R^{10} as defined in any one of the preceding claims; or

- (C) one of R^3 and R^4 is a group $\text{C}(\text{O})\text{NR}^{12}\text{R}^{13}$ wherein R^{12} and R^{13} and the nitrogen atom to which they are attached together form a saturated heterocyclic group having from 4 to 7 ring members and containing 1, 2 or 3 heteroatom ring members selected from N, O and S; or
- (D) R^3 and R^4 are the same or different and are selected from C_{1-4} alkyl groups optionally substituted by halogen, hydroxy or methoxy.

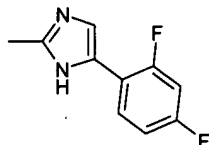
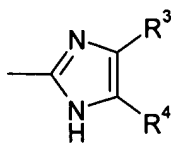
74. (new) A compound according to claim 64 wherein the imidazole group



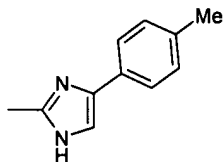
is selected from the groups B1 to B40 set out in Table 2:

Table 2 – Examples of the Imidazole Group		
<p>B1</p>	<p>B2</p>	<p>B3</p>

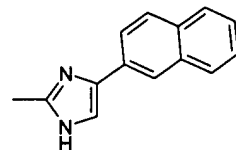
Table 2 – Examples of the Imidazole Group



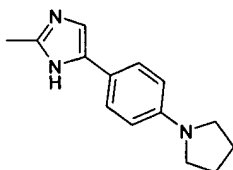
B4



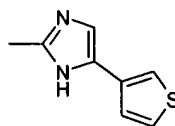
B5



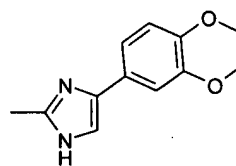
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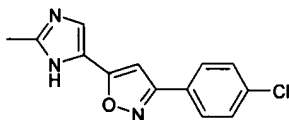
B7



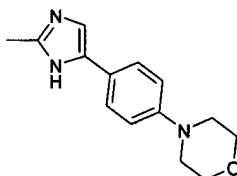
B8



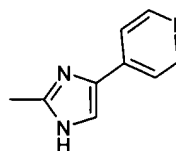
B9



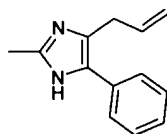
B10



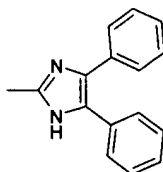
B11



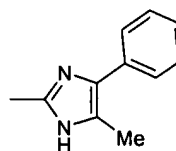
B12



B13

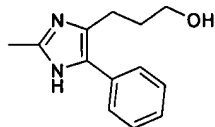
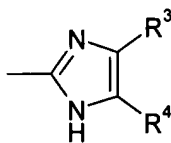


B14

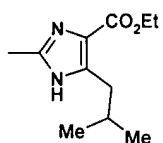


B15

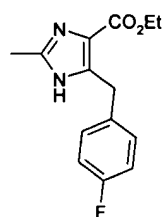
Table 2 – Examples of the Imidazole Group



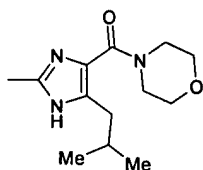
B16



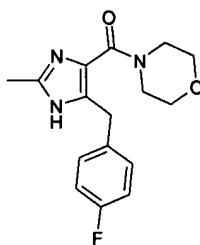
B17



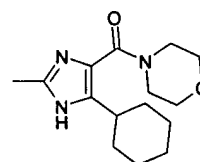
B18



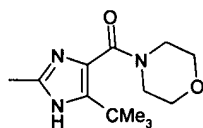
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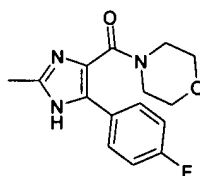
B20



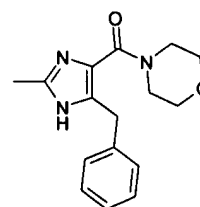
B21



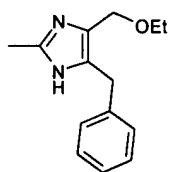
B22



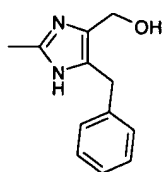
B23



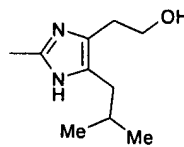
B24



B25

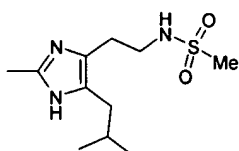
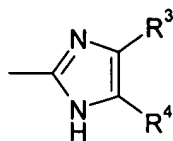


B26

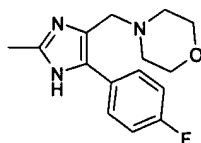


B27

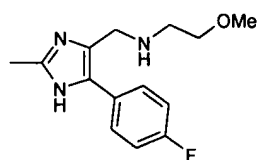
Table 2 – Examples of the Imidazole Group



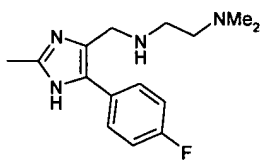
B28



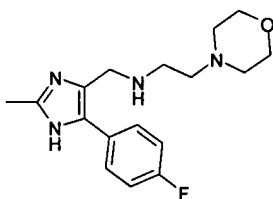
B29



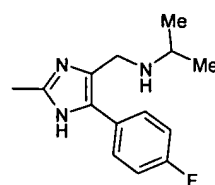
B30



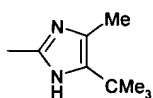
B31



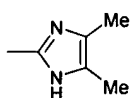
B32



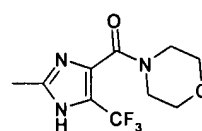
B33



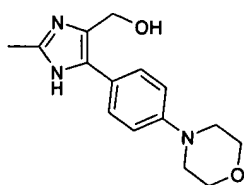
B34



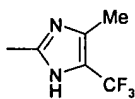
B35



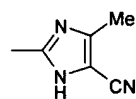
B36



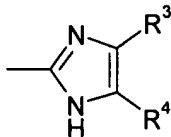
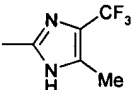
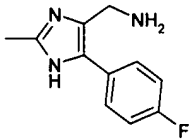
B37



B38



B39

Table 2 – Examples of the Imidazole Group		
		
 B40	 B41	

75. (new) A compound according to claim 74 wherein the imidazole group is (i) selected from the groups B1 to B6, B8, B9 and B11 to B16 of Table 2, or is (ii) selected from B18, B19, B20, B22, B24, B25, B26, B27, B28, B29, B31, B34, B35, B37 and B38; or is (iii) selected from the groups B1 to B6, B8, B9, B11 to B13, B15 and B16; or is (iv) selected from the groups B2, B4, B12, B15 and B16.

76. (new) A compound according to claim 64 in the form of a salt or solvate.

77. (new) A pharmaceutical composition comprising a compound of the formula (I) as defined in claim 64 and a pharmaceutically acceptable carrier.

78. (new) A method for the prophylaxis or treatment of a disease state or condition mediated by a cyclin dependent kinase, which method comprises administering to a subject in need thereof a compound of the formula (I) as defined in claim 64.

79. (new) A method according to claim 78 wherein the disease state or condition is selected from proliferative disorders, viral infections, autoimmune diseases and neurodegenerative diseases.

80. (new) A method according to claim 79 wherein the proliferative disorder is a cancer selected from breast cancer, ovarian cancer, colon cancer, prostate cancer, oesophageal cancer, squamous cancer, and non-small cell lung carcinomas.

81. (new) A method of modulating a cellular process by inhibiting the activity of a cyclin dependent kinase using a compound of the formula (I) as defined in claim 64.

82. (new) A method for treating a disease or condition comprising or arising from abnormal cell growth in a mammal, which method comprises administering to the mammal a compound of formula (I) as defined in claim 64 in an amount effective to inhibit abnormal cell growth.

83. (new) A method for the prophylaxis or treatment of a disease state or condition mediated by glycogen synthase kinase-3, which method comprises administering to a subject in need thereof a compound of the formula (I) as defined in claim 64.